

REMARKS

Claims 1-26 are pending and stand rejected. Claim 27 is new and supported by Figure 5 of the originally-filed application. Applicant respectfully traverses the rejections and requests a withdrawal of all rejections as set forth below.

Claims 1-9, 10-13, 4-23 and 24-26 stand variously rejected under 35 U.S.C. 103(a) as being unpatentable over Nardeo (U.S. 6530897 B2) in view of Pearson (U.S. 2003/0212394 A1) and/or additionally cited references. Claim 1 relates to a steerable catheter including a thumb wheel supporting a pinion gear rotating about a common thumb wheel axis. A rack arm includes runners, an attachment point coupling a deflection wire to the rack arm, and a linear rack. The runners are received by a guide track formed within the catheter handle in substantial alignment with a longitudinal axis of the handle. The rack arm extends obliquely to the handle longitudinal axis from the runners to the linear rack.

The Examiner admits that Nardeo fails to disclose a guide track, rack arm, runners, pinion gear or linear rack. Pearson is relied upon for purportedly teaching a rack and pinion mechanism that could be substituted for the deflection mechanism disclosed by Nardeo. The Examiner makes the conclusory statement that "Pearson teaches that it is old and well known in the art to use rack and pinion mechanisms as deflection mechanisms in catheters." The Examiner's conclusion that Pearson includes or makes obvious a rack arm extending within the handle, obliquely to the handle longitudinal axis, from runners to a linear rack by virtue of merely listing "a rack and pinion" as one gear mechanism that could be used in deflecting a deflectable portion cannot stand under any logically supportable analysis. Pearson provides no teaching for actually implementing a rack and pinion gear mechanism. A series of modifications to Nardeo would be required to arrive at the claimed structure, and these modifications are not taught by Pearson. For example, in order to arrive at the claimed structure, modifications to Nardeo would have to include: adding a pinion gear to the thumb wheel, adding a guide track to the handle, providing an attachment point movable along

a linear path substantially aligned with the deflection lumen, and more. These modifications are clearly not taught or implied by Pearson. Nardeo's deflection mechanism is a thumbwheel. Substituting a rack and pinion system for Nardeo's thumbwheel, as suggested by the Examiner, could involve, for example, providing a rack, extending parallel to the handle longitudinal axis, that is pushed or pulled by a user to cause rotation of a pinion gear replacing Nardeo's thumbwheel for moving a deflection wire attached to the pinion gear in the same manner the deflection wire is attached to Nardeo's thumbwheel. With such modifications made, Nardeo's modified device would be distinctly different than the claimed structure for a number of reasons yet indeed replaces a rack and pinion gear for Nardeo's thumbwheel as suggested by the Examiner. As such, the Examiner's conclusion that the claimed structure is made obvious by merely replacing Nardeo's thumbwheel with a rack and pinion mechanism cannot stand. One obvious difference between Nardeo's modified device and the claimed structure is that once the thumbwheel is replaced by a rack and pinion mechanism, Nardeo's device would no longer have a thumbwheel. Applicant respectfully asserts it would not be obvious to one having ordinary skill in the art how to substitute a rack and pinion gear mechanism in Nardeo's device based on the teachings of Pearson in order to arrive at the claimed structure without the benefit of the teachings of the present invention.

The present invention specifically teaches embodiments that overcome a number of challenges in physically implementing a linear rack and pinion gear in the handle of a catheter to provide linear movement of a deflection wire attachment point along a path substantially aligned with the deflection lumen. The combination of Nardeo and Pearson fails to teach, suggest or imply, among other things, a rack arm extending obliquely to the handle longitudinal axis between a linear rack and runners. None of the additionally cited references overcome this deficiency relating to an obliquely extending rack arm. For at least this reason, and as discussed above, Applicant respectfully submits the rejection is improper and should be withdrawn.

Applicant respectfully asserts that the present claims are in condition for allowance. Withdrawal of the instant rejections and issuance of a Notice of Allowance is respectfully requested.

Respectfully submitted,

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Date

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